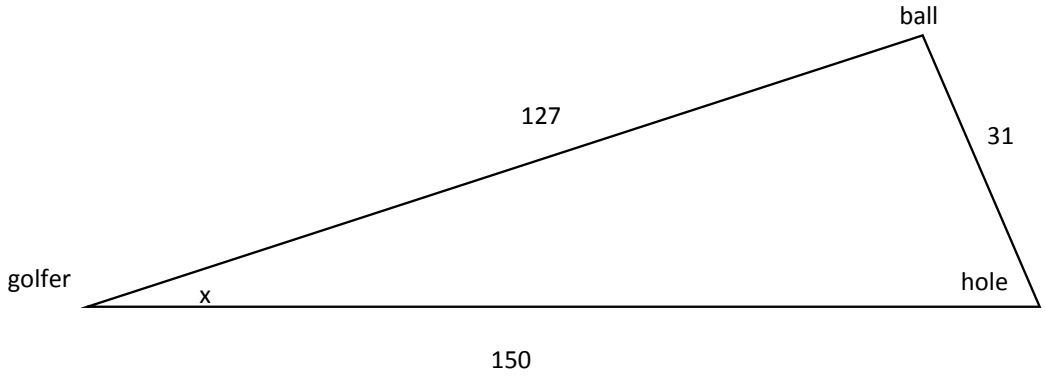
Answer on question 36234 – Math – Geometry

A golfer hits her ball a distance of 127 m so that it finishes 31 m from the hole. If the length of the hole is 150 m, calculate the angle between the line of her shot and the direct line to the hole.

Solution



Using the cosine theorem we obtain

$$31^2 = 127^2 + 150^2 - 2 * 127 * 150 * \cos x$$

$$\cos x = \frac{961 - 16129 - 22500}{-38100} \approx 0.98866$$

$$x \approx 8.63\ degrees.$$

Answer: 8.63 degrees.